The Economic Impact of the Winter Olympic & Paralympic Games

Initial Estimates
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A Report
Prepared For:

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I remain solely responsible for the opinions expressed and the conclusions presented in this paper.

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EXECUTIVE SUMMARY

Winning the bid for the 2010 Winter Olympic Games and Paralympic Games would create both an opportunity and a challenge for the 2010 Organizing Committee and the province at large. The opportunity is to structure a Games which could generate in the region of three billion dollars in *incremental* economic activity and sixty-seven thousand direct and indirect jobs across the province. These benefits would be built up over an extended period, beginning as early as the formal announcement of the bidding cities in 2002, and extending well beyond the Games year of 2010.

The challenge, beyond winning the bid, is to construct and host a well-executed Olympic event which is substantially financed through international broadcast fees, sponsorships and other Games-related revenue collected from individuals and corporations outside British Columbia. Contracts negotiated by the International Olympic Committee (IOC) for international broadcast rights and major corporate sponsors of recent Olympic Games have demonstrated that a 2010 Olympic Games financed substantially by private sector contributions and Games-generated foreign tourist spending is a realistic goal for British Columbia.

One substantial piece of ancillary infrastructure that would materially contribute to the long-term incremental benefits from the Games project is the proposed Vancouver Convention and Exhibition Centre (VCEC) expansion. The Games require a media centre of approximately 250,000 square feet to house the activities of about 7,000 national and international media representatives during the Games. As yet, no alternative to the convention centre expansion has been identified to house this media requirement. Because the VCEC expansion is a viable project with or without the Games, the costs of the expansion are not included in the Games model. The incremental impact of the expansion project has been modeled separately from the 2010 model and its results are summarized separately below.

While the incremental tax benefits from both the Games and the VCEC expansion may offset a large portion of the cost of other infrastructure improvements, (including transportation systems), the federal, provincial or municipal governments may undertake in support of the Games, those infrastructure projects may also be expected to generate other real, long-term public benefits such as lower demand for medical services. This paper describes a number of such benefits expected to arise from these other ancillary infrastructure projects but they are not quantified in this paper.

Like Expo 86, the 2010 Games provide a unique opportunity to raise international awareness of British Columbia to a higher plateau, and in doing so to increase the volume of international tourism to British Columbia and investment in British Columbia on a long-term basis for the benefit of all British Columbians.

There are a variety of risks to be identified, evaluated and managed in the course of hosting the Games ranging from those conventionally inherent in the construction

management process to more exotic external risks such as a boycott of the Games. The potentially most damaging risk to the economic impact of the Games is that of a prolonged, ill-timed USA or global recession which might significantly diminish both the value of key revenue contracts and expansion of international visitor volumes.

The economic model which generates the results reported in this paper segregates the incremental economic impact, in a sense the *net profit to the provincial and federal treasuries* uniquely attributable to the Games event, from the gross economic impact. Because the costs of the Games will be incurred over a protracted period between 2003 and 2010, and the tourism impacts of the Games will be felt over an even longer period, the model examines these impacts over an extended period.

The following tables summarize the initial results of the model given the cost and revenue data available to date and several tourism impact scenarios which reflect the experience at the Calgary'88 Winter Games, the Sydney 2000 Summer Games, and Expo 86 among others. The model outputs will change as the 2010 Bid Office finalizes sites, programs, schedules and costs of the necessary facilities and services required to host the Games.

The impacts are bracketed at the low end by a conservative scenario, referred to as the *low effort/low response* outcome in the summary impact tables, and an aggressive scenario (*best effort/best response*) at the high end of possible outcomes. The conservative scenario reflects our projected worst case outlook for tourism impact, based on a minimal marketing effort and a minimal response from foreign visitors. The aggressive scenario reflects our projected best case outlook for tourism impact, based on a highly effective, coordinated, focused, high impact long-term international marketing campaign built around the Games' host city selection, the construction progress and the Games event itself. Between these scenarios are an *average effort/average response* and a *better effort/better response* scenario. Each scenario in the summary tables records the combined impacts of the Games-related revenue and expenditures and the tourism expenditures induced by the media exposure surrounding the Games development program.

Based on the cost and revenue information available to date, the first table below summarizes the projected *gross* impact of hosting the Games in 2010. This table recognizes that every dollar spent in preparing for and hosting the Games will have an economic impact, regardless of who spends the dollar. The second table summarizes the projected *incremental* economic impact. This incremental impact is smaller because it ignores the impact of dollars spent by residents or by the provincial or local governments which would still be spent in the province in the absence of this project. The *incremental* federal tax captures the impact only of spending originating outside Canada.

The additional impacts associated with higher levels of effort in the following tables arise not from additional capital spending, rather from increased tourism. The increased tourism is principally a result of working smarter within existing marketing budgets through increasing levels of cooperation, coordination and sophistication amongst the

national, provincial and local marketing organizations which would be involved in the Games.

The tax revenue impacts for senior governments, as recorded in the following tables, are conservatively stated under all scenarios in so far as they do not include any provision for corporate income tax, as explained in the main text.

Summary Table of *Gross* Economic Impacts - 2010 Games[1]

TOURISM IMPACT SCENARIO (MARKETING EFFORT/SUCCESS)	GDP (BILLIONS)	JOBS[2] (THOUSANDS)	FED TAXES (MILLIONS)	PROV TAXES (MILLIONS)	LOCAL TAXES (MILLIONS)
LOW EFFORT/LOW RESPONSE	2.7	59	245	236	48
AVERAGE EFFORT/AVERAGE RESPONSE	3.4	76	356	335	68
BETTER EFFORT/BETTER RESPONSE	3.9	90	438	408	83
BEST EFFORT/BEST RESPONSE*	4.6	106	535	496	100

Summary Table of *Incremental* Economic Impacts - 2010 Games[1]

TOURISM IMPACT SCENARIO (MARKETING EFFORT/SUCCESS)	GDP (BILLIONS)	JOBS[2] (THOUSANDS)	FED TAXES (MILLIONS)	PROV TAXES (MILLIONS)	LOCAL TAXES (MILLIONS)
LOW EFFORT/LOW RESPONSE	1.6	37	175	164	37
AVERAGE EFFORT/AVERAGE RESPONSE	2.4	55	288	265	57
BETTER EFFORT/BETTER RESPONSE	2.8	67	367	336	71
BEST EFFORT/BEST RESPONSE	3.5	83	467	426	89

[1] NOTE: Dollar values are Net Present Value for the period 2001 - 2020, in 2001 dollars.

[2] NOTE: Aggregate of person-years of employment over the period. See Appendix A for description.

Only the *incremental* impacts of the VCEC expansion have been calculated. These are summarized below. The gross impacts would be considerably larger in all categories. The VCEC expansion impact model counts only those impacts which are funded by the expenditures of non-residents who attend a convention in the province. The impact of the projected expenditure on expansion is captured in the VCEC model and is not included in the 2010 model. Consequently, the incremental impacts of the expansion are wholly *additional* to the impacts of the Games, recorded above.

The scenarios described below indicate the senior governments' share ($405 million, as proposed by the Vancouver Convention Centre Expansion Task Force) of the projected $495 million cost of the expansion will be recovered by governments 1.9 to 3.4 times.

Summary Table of *Incremental* Economic Impacts - VCEC Expansion[3]

	GDP (Billions)	JOBS[4] (Thousands)	FED TAXES (Millions)	PROV TAXES (Millions)	LOCAL TAXES (Millions)
VCEC Expansion *without* 2010 Games					
Conservative Growth	3.5	65	384	367	73
Moderate Growth	4.3	87	478	453	91
Aggressive Growth	5.1	111	575	542	108
VCEC Expansion *with* 2010 Games					
Conservative Growth	4.1	81	453	430	86
Moderate Growth	5.5	121	618	581	116
Aggressive Growth	6.5	145	718	674	135

[3] Note: Dollars are Net Present Value of the benefit stream over the 30-year economic life of the asset.

[4] Note: Aggregate of person-years of employment over the 30-year period. See Appendix A for description.

Expansion of the Vancouver Convention and Exhibition Centre as part of the 2010 Games would be highly beneficial to both projects, meeting a critical facility need for the Games while accelerating the rate of growth in international convention delegate attendance that would otherwise be expected. The combined *incremental* impact results of these two projects would be expected to fall within the range set out below.

Summary Table of *Incremental* Economic Impacts - VCEC Expansion & Games[5]

	GDP (Billions)	JOBS[6] (Thousands)	FED TAXES (Millions)	PROV TAXES (Millions)	LOCAL TAXES (Millions)
VCEC Expansion & 2010 Games					
Low Tourism & Delegate Impact	5.7	118	628	594	123
Moderate Tourism & Delegate Impact	8.1	182	945	881	180
High Tourism & Delegate Impact	10.0	228	1185	1100	224

[5] Note: Dollar Values are Net Present Value of the respective benefit streams, in 2001 dollars.

[6] Note: Aggregate of person-years of employment over the observation period. See Appendix A for description.

Conclusion

As the model and the experience of former host cities illustrates, hosting the 2010 Winter Olympic Games can be a very rewarding exercise for the host communities and the province under appropriate circumstances. The economic rewards are largely dependent on striking an appropriate balance between the all-in cost of hosting the Games, and the visitor volumes that can be generated before, during and following the Games. As Expo 86, Calgary'88 and other hallmark events have demonstrated, a long-term boost in visitor volumes can be achieved with a combination of well-executed Games delivery and a media campaign carefully designed to integrate with and take full advantage of, the international broadcast coverage before and during the Games.

If the success of Expo 86 is any indication of the skill, commitment and volunteerism British Columbia would bring to an Olympic Games, and taking into account the inherent differences between an Olympic event and an exposition, a well-executed campaign around the 2010 Games should be expected to generate incremental benefits for Canada and British Columbia in the range represented by the Better Effort/Better Response and Best Effort/Best Response lines in the preceding table.

THE ECONOMIC IMPACT OF
THE WINTER OLYMPIC GAMES & PARALYMPIC GAMES

*Faster, higher, stronger**

I. PREFACE

In October 1998, the Vancouver Whistler 2010 Bid Society formally submitted a bid to the Canadian Olympic Association (COA) to be the host "community" for Canada's bid for the 2010 Olympic Winter Games and Paralympic Games, (hereafter collectively referred to as the *Games* or the *Winter Games*). Vancouver Whistler was subsequently selected by the COA as the Canadian contender. In accordance with the required practice, the success of the bid was followed by dissolution of the Bid Society and formation of the Vancouver Whistler 2010 Bid Corporation (VW2010).

On July 13, 2001, the International Olympic Committee (IOC) selected Beijing as the host city for the 2008 Olympic Summer Games over several contenders, including Toronto. The demise of the Toronto bid signaled the start of the sprint by VW2010 to finalize a winning bid for IOC selection in 2003 as host for the 2010 Winter Games. It also freed up the COA to throw its full weight and resources behind the 2010 bid.

Why do cities pursue the Games? Cities choose to host Olympic Games for very different reasons. While the development of sport, athleticism and world peace are underlying themes of all Olympic Games, the decision to host an Olympic Games has as much to do with the social, psychological or economic stimulus that can be derived from such large events. Some cities have used the Games as a catalyst for urban renewal. The 2000 summer Olympic Games in Sydney, for example, were developed on a site that had been home to an unusable swamp, a meat-packing house, a brick works and a munitions dump. Some countries have used the Games to legitimize their claim to first world economic status. All hosts aim to rise their international profile.

Hosting the Games also creates a platform to showcase leading aspects of the economy or leading edge technology The so-called "greening" of the Games is a predominant theme in recent host city selections by the IOC. Sydney responded by, among other things, developing their athletes village to continue after the Games as the world's largest solar-powered settlement. British Columbia might wish to showcase applications of fuel cell technology, for example.

For British Columbia, hosting the Games is fundamentally an opportunity to replicate the kind of economic and psychological stimulus and the considerable enduring incremental economic benefits the province achieved with Expo 86. The ability of a "hallmark" event of this nature to foster a public sense of economic momentum, which in turn fosters new investment and economic growth, should not be ignored. Unfortunately, there is no credible method to estimate these impacts with any accuracy before the event and they are not reflected in numerical outputs reported in this paper.

*Baron Pierre de Coubertin

Setting aside the non-monetary benefits of the Games, VW2010 and its guarantor, the Province of British Columbia, will want to know under what cost and revenue conditions the Games can be expected to generate a *positive incremental economic impact* in British Columbia. The bidding process and construction program required by the IOC dictates that the host city is selected about seven years before the event. That schedule forces the bidding cities to make their bid commitment based on estimates of economic impact and financial forecasts developed from seven to ten years before the Games event.

To measure this impact of bidding for and hosting the Games, and the impact of the attendant international media exposure on tourism volumes, we have developed a sensitivity model to estimate the Gross Domestic Product (GDP), tax revenue and employment effects under a range of cost and tourism conditions. The model is described in Appendix A and is referred to variously as *the model, the Games model* and *the 2010 model.*

While the modern Olympic Games have taken place on a more or less regular schedule for almost 100 years, lack of consistency in data collection and reporting makes meaningful comparisons amongst Games impossible except at the broadest level. The comparative analysis that has been done focuses almost exclusively on the Summer Games. More significantly, very little academic research focuses on quantifying the long-term economic impacts of such hallmark tourism events and little data exists to permit comparison of forecasts with actual results.

Reports from relatively recent winter Games at Nagano (1998) and Lillehammer (1994) provide interesting anecdotal evidence but often lack context. The official Lillehammer post-Games evaluation report, for example, states overnight visits rose by 65% in the four years leading up to the Games, but does not distinguish between resident and non-resident visitors - a critical distinction in calculating incremental economic impacts.

More difficult still in estimating the likely tourism implications of the 2010 Games is measurement of the role of geography and place recognition on visitor volumes. Some evidence and logic support the proposition that hallmark events like the Olympic Games, held in high profile and universally recognized cities such as London or Paris or Los Angeles have a much smaller impact on international visitor volumes to such cities than do such events held in less widely known cities, such as Vancouver. Similarly, countries such as water-locked Australia, geographically remote from the most of the first world economies, presumably have a tougher time building the volume of international visitors, even for hallmark events, than would British Columbia with the USA at its doorstep.

The seven year gestation stage for the Games exposes the costs and benefits of the event to a variety of internal and external risks Ultimately, the economic success of the Games will depend on early recognition of these risks, development of risk containment strategies and careful planning, cost control and skillful execution.

Finally, the economic impact of winning the bid and hosting the Games is maximized by treating the project as an opportunity to raise, to a new plateau, international awareness of, and interest in British Columbia as a year round tourism destination,.

Those seeking a comprehensive understanding of the business and economics of the Olympic Games are directed to *Economics of the Olympic Games - Hosting the Games 1972 - 2000* by Holger Preuss.[1]

II. What Are Incremental Economic Benefits?

NOTE: The following definitions are fundamental to an understanding of the conclusions of this paper. These terms may be used differently or given different definitions in other works.

When a resident of British Columbia spends the pay cheque on food, lodging, entertainment, transportation and the other normal household purchases, those expenditures become income to the suppliers of those goods and services, wages to their employees, taxes to governments and investment in new business, among other things. Those owners and employees similarly spend their wages on goods and services, with similar effects on taxes, employment and growth. The collective impact of these individual transactions by all of the residents, across the economy, is *economic impact* and is measured for our purposes in terms of the size of the economy, Gross Domestic Product or GDP, tax revenue to governments and in the number of jobs created or maintained. The jobs data in this report does not include the many volunteers who would be engaged to assist with the Games delivery. An interpretation of the jobs data is included in Appendix A.

This input-output approach significantly understates the true economic impact of a Games in British Columbia in at least two important respects. First, the federal and provincial tax calculations do not include corporate income tax due to technical difficulties in estimating it. Secondly, the economic impact is understated to the extent that incremental social benefits or non-quantified monetary benefits accrue to residents from the project. For example, improvements in transportation infrastructure may incidentally lead to reduced travel times, reduced travel costs, fewer accidents or the opening up of new business opportunities. Similarly, Games facilities left after the Games, which induce residents to spend their recreational budget in the province rather than elsewhere, will have a positive additional but uncounted impact on the province which is not captured in the summary tables in this paper.

Finally, the input/output approach cannot capture extraordinary changes in foreign direct investment into, or exports from British Columbia and Canada, which are attributable to increased international awareness created by the Games publicity. While there is anecdotal evidence of significant investment and export effects associated with Olympic

Games, we have not yet determined whether these impacts can be isolated. Accordingly, no estimate of potential incremental benefit from trade or foreign investment is included in the summary tables.

The input-output approach assumes all of the "inputs" required to complete the project, workers, machinery, steel beams and so forth, would be unemployed if not engaged in the Games project. To the extent non-Games projects would have employed these inputs in the absence of the Games and those projects did not proceed, or were delayed, because of the Games, then an opportunity cost is incurred for these missed or delayed opportunities. These potential opportunity costs are very difficult to identify before they occur and are not quantified in this analysis. Such opportunity costs can be minimized by VW2010 and the Province through timely scheduling of the elements of the Games construction program over the period 2003 to 2009 so as to reduce or eliminate spikes in demand for the inputs.

Incremental economic impact occurs when new money is injected into the economy from external sources. This occurs most commonly when domestic goods and services are sold to buyers not normally resident in the province, foreign tourists for example, or, in the case of the Olympic Games, when corporate sponsorships, international broadcast rights or Games souvenirs, among other things, are sold to non-residents. These foreign "sales" arising from the Olympic initiative are uniquely a product of the Games, would not otherwise occur and hence are purely incremental to the domestic economy. If the incremental impact on the provincial Treasury created by externally generated spending exceeds the cost of any Treasury spending that would not have occurred in the absence of the Games project, the Games can be said to be self-financed and "profitable" for the Treasury.

The Games Legacy must not be confused with the incremental economic impact. The Games Legacy is an IOC term which captures the value of the Games facilities and improvements to community facilities that are turned over to communities or sports organizations after the Games. The legacy is intended to includes a sports facility endowment fund for on-going operations of sports facilities, venues and events. It is an important feature as some of the facilities required to host the Games, the bob/luge track for example, may require on-going operating subsidies. Not providing such facilities is not an option in bidding for or hosting the Games.

This *Legacy* fund is defined by the surplus of VW2010 revenues over VW2010 costs and as such is a subset of the broader revenue concept used in the incremental economic impact calculation. Because the VW2010 revenue calculation is specific to the delivery and operation of the Games themselves and does not capture any pre or post-Games tourism impacts, it is possible to have a legacy deficit but still have a positive incremental economic impact for the province.

The VW2010 office will need to examine all opportunities to minimize both the capital and the operating costs of the Games facilities and to maximize the post-Games revenue

potential in order to maximize the legacy fund. It has been suggested that the IOC may be ready to switch to a standard North American size hockey surface. That initiative alone would generate substantial cost savings.

III. Who benefits From the Games?

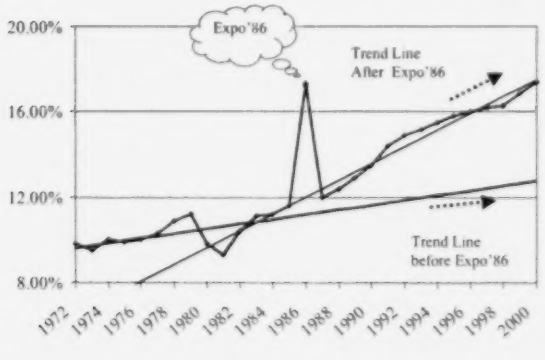
The impact of Vancouver Whistler winning the bid and hosting a successful Games would be felt throughout the province and across a number of sectors. The provincial tax component of an incremental economic benefit would provide new cash, contributed by non-residents, to fund the government's social and economic priorities, for the benefit of all residents. While the employment effects of the Games event itself are short-term and composed largely of volunteers, the long-term employment gains will be reflected mostly in the construction and tourism sectors, the latter as it responds to accelerated long-term growth in international visitor volumes created by enhanced awareness of British Columbia.

As the Games event would be held in the Lower Mainland, the benefits will be perceived to accrue to the Lower Mainland to the exclusion of the rest of the province. In fact, a lot of the inputs ranging from construction materials to table wines will originate outside the Lower Mainland. As was the case with Expo 86, while the event may be focused in the Lower Mainland, the long-term impact will be felt province-wide.

IV. The Value of Hallmark Events

Major, internationally recognized *hallmark* tourism events like the Calgary Stampede or an Olympic Games can have a substantial enduring impact on the growth of international travel to British Columbia. This was demonstrated by Holmes and Shamsuddin of Simon Fraser University in 1997[2]. With a multivariate statistical model developed for the purpose, these researchers examined American tourism to British Columbia in the five years following Expo 86. Eliminating the effects of other variables such as currency exchange rates and travel price indexes, the research by Holmes and Shamsuddin lead them to the conclusion: *what is clear from this study is that the long-term economic benefits from successful mega-events, such as Expo 86, are very large (probably larger in total than the short-term economic benefits). These benefits result from the post-mega-event visitors who come to the sponsoring city as a result of its world-wide exposure by the event.* The key enduring benefit is the incremental growth in tourism resulting from the volume and quality of international media exposure surrounding the event.

British Columbia Share of International Visitors to Canada

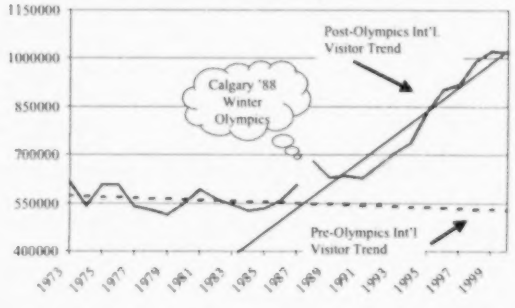


Holmes and Shamsuddin examined only American visitors and only in those first five post-Expo years. Examination of European and Japanese travel data suggests similar conclusions. This chart above, drawn from Statistics Canada data, illustrates the dramatic change in the trend of total international visitors to British Columbia in the 14 years before 1986 and the 14 years following. In the 14 years prior to 1986, British Columbia's share of total international visitors to Canada fluctuated in the relatively narrow range of 9.5% to 11.6%. This jumped to over 17% during 1986. Since Expo 86 British Columbia's share of international visitors to Canada has increased every year from 12 % in 1987 to 17.4% in 2000. There are undoubtedly a number of contributing factors for this performance, including the federal "open skies" airport policy in recent years, but the common thread appears to be the heightened international awareness of British Columbia kicked off by Expo 86.

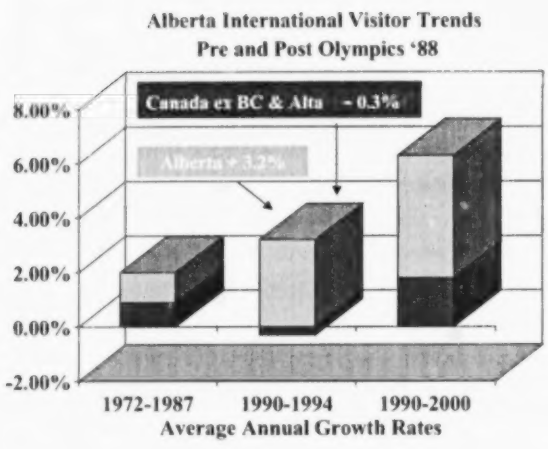
Similar, but smaller scale, impacts appear to follow the Calgary 1988 Games. This chart shows the growth trend in international travel to Alberta following the 1988 Calgary Winter Olympics.

International Visitor Volumes – Alberta

Pre and Post '88 Calgary Winter Olympics



It is instructive to observe what was happening to international visitor volumes to the rest of Canada in this period. Data for Canada excluding BC and Alberta is compared to BC and Alberta results. Comparison of the average annual growth rate of international tourism in three periods - the years from 1972 to the pre-hallmark event year, the years two through seven after the event, and the post event year two through to year 2000 produces interesting results. In both cases (BC and Alberta) data for the year of the event and the post-event year was excluded to eliminate the distorting effect of the large spike in visitors which occurs during the event year and the inevitable drop the following year.

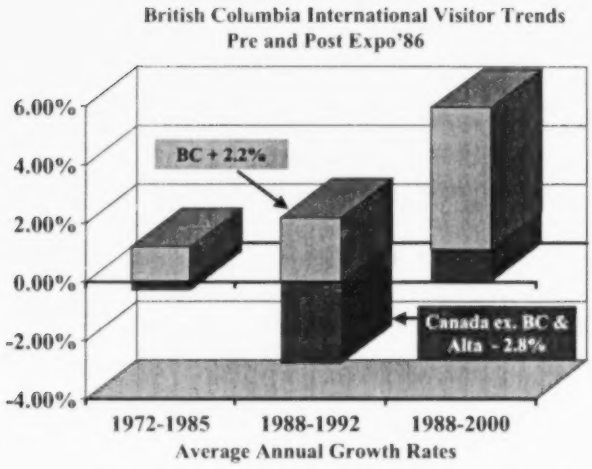


As can be seen in these next two charts, the rate of growth in international visitor volumes has considerably outpaced the rest of Canada in the respective British Columbia and Alberta post-hallmark event periods.

Looking at the data from a slightly different perspective provides similarly interesting results. The numbers in brackets are the *Canada-excluding-BC-and-Alberta* equivalents. In the period 1972 to 1986 Alberta's annual international visitor volumes rose and fell with some regularity. While it earned large increases in some years it gave virtually all of the gains back in other years so that by 1985 the average annual rate of growth since 1972 was a mere 0.25% (-0.02%). The pre-Olympic years 1986 and 1987 show growth of 5% (5%) and 8% (4%) respectively, followed by a 12% (-2%) surge in the Olympic year, 1988.

While Alberta gave back 69% of the Olympic year gains the following year, it remained more than 18% (3.9%) ahead of the 1985 volume and 3.7% (-5.2%) ahead of the immediate pre-Olympic year. Unlike in the 1972 - 1985 period, Alberta retained virtually all of the post-Olympics gains in international visitor volume, posting average annual gains of 3.25% for the first five post-Olympic years compared to an average annual loss of 2.5% for the rest of Canada, excluding BC. Considering *the rest-of-Canada-except-BC* volume was roughly 59 times larger than the Alberta volume in the 1980's, Alberta's tourism appeal showed remarkable strength against the strong outgoing tide elsewhere in Canada.

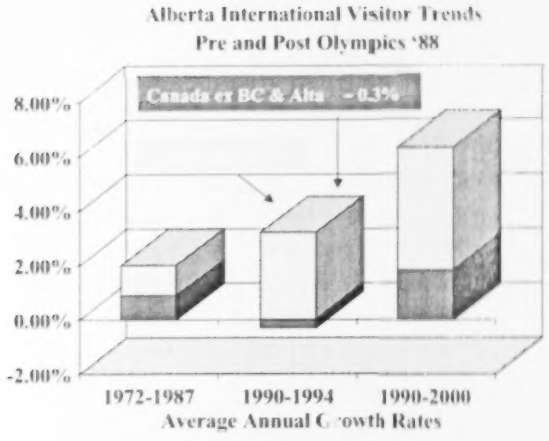
The apparent impact of Expo 86 was more dramatic. While the exposition did not have the same long seven year build up, the event itself was much longer, running six months versus about one month (including Paralympics) for the Winter Games. During the Expo



year, 1986, British Columbia attracted an astonishing 68% additional international visitors to the province, (more than 2.8 million), on top of a solid 6% gain the previous year. In the first post-Expo year, 1987, the province gave up most of the Expo gain but retained a 14% increase over the volume in the immediate pre-Expo year, 1985. In the first five post-Expo years, 1987 - 1991, British Columbia gained each year, with an average annual growth of 5.4% compared to 1985. Meanwhile, the rest of Canada, excluding Alberta experienced declining volumes in four of the five years and an average annual growth of just 0.2% compared to 1985.

From 1924 to the Albertville Games in 1992, the summer and winter Olympics were held in the same Olympic year. To create a transition to the current alternating cycle of summer and winter Games, Lillehammer, Norway hosted the Olympic Winter Games just two years after Albertville. One of the consequences of this transition was that Lillehammer and Norway had to share the media attention with Albertville in the run-up to the Albertville Games. Nevertheless, Norway did exceptionally well in building the volume of international visitors and sustaining it after the 1994 Games. While the official travel statistics for the 1990 - 2000 period, as reflected in this chart are only available at the national (Norway) level, a post-Games research report on Lillehammer released by the IOC[9] in March 1997, indicates tourism (domestic and foreign) in the Lillehammer region grew 57% between 1989 and 1994 versus 22% nationally.

These observations support the hypothesis that the international media exposure surrounding these three hallmark events pushed international awareness and, consequently, international visitor volume to a permanently higher plateau in each of the host jurisdictions. In both of the provincial cases this growth was achieved during a significant extended downturn in international visitor volume to the rest of Canada. In



As can be seen in these next two charts, the rate of growth in international visitor volumes has considerably outpaced the rest of Canada in the respective British Columbia and Alberta post-hallmark event periods.

Looking at the data from a slightly different perspective provides similarly interesting results. The numbers in brackets are the *Canada-excluding-BC-and-Alberta* equivalents. In the period 1972 to 1986 Alberta's annual international visitor volumes rose and fell with some regularity. While it earned large increases in some years it gave virtually all of the gains back in other years so that by 1985 the average annual rate of growth since 1972 was a mere 0.25% (-0.02%). The pre-Olympic years 1986 and 1987 show growth of 5% (5%) and 8% (4%) respectively, followed by a 12% (-2%) surge in the Olympic year, 1988.

While Alberta gave back 69% of the Olympic year gains the following year, it remained more than 18% (3.9%) ahead of the 1985 volume and 3.7% (-5.2%) ahead of the immediate pre-Olympic year. Unlike in the 1972 - 1985 period, Alberta retained virtually all of the post-Olympics gains in international visitor volume, posting average annual gains of 3.25% for the first five post-Olympic years compared to an average annual loss of 2.5% for the rest of Canada, excluding BC. Considering *the rest-of-Canada-except-BC* volume was roughly 59 times larger than the Alberta volume in the 1980's, Alberta's tourism appeal showed remarkable strength against the strong outgoing tide elsewhere in Canada.

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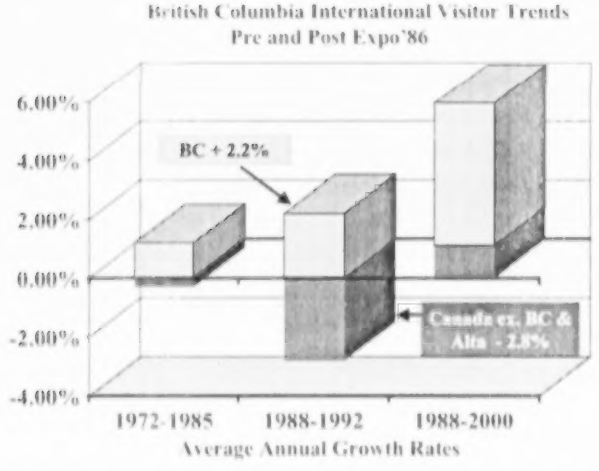

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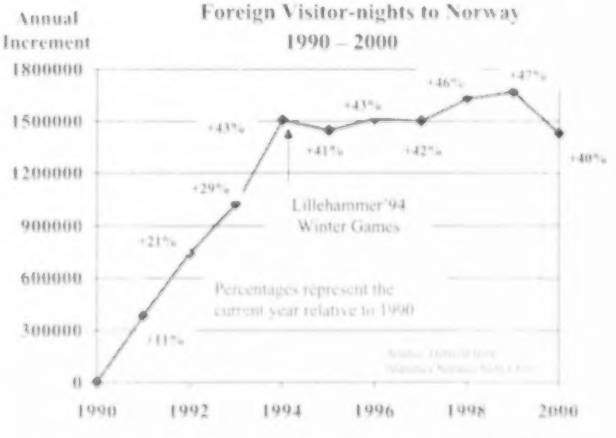

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both cases this higher plateau also appears to have served as the launch pad for longer term tourism growth that has substantially outpaced the rest of Canada for more than a decade following the respective event.

IV(A). IMPLICATIONS FOR THE CONVENTION INDUSTRY

Hallmark events can also have a profound impact on the host state's international convention business. A study of the four most recent summer Olympic Games host cities by Jones Lange LaSalle[8] highlights this fact. Sydney, for example, increased its convention bid win average by 34% following its selection in 1993 to host the 2000 Games. Barcelona experienced a 29% increase in international delegates in the immediate post-Games year and achieved a 21% annual compound growth in international delegates in the six years following the 1992 Games.

Whether the 2010 Games will have an impact on the volume of international delegates to British Columbia depends primarily on whether the proposed expansion of the Vancouver Convention and Exhibition Centre (VCEC) proceeds. The current convention facilities have been operating at capacity since about 1995, leaving little room for Games-induced growth of delegate volume.

While an expanded VCEC has been targeted as the venue for the media centre for the Games, the expansion was originally proposed as a viable stand-alone project before interest in the Games bid developed. Consequently, the incremental impact of the VCEC expansion has been examined through a separate sensitivity model developed for that purpose. Through the VCEC model, low, moderate and aggressive non-resident delegate growth scenarios were developed.

For the purposes of this study we have assumed the impact of the Games publicity on an expanded Vancouver Convention and Exhibition Centre (VCEC) would raise the average annual delegate growth rate under the aggressive growth scenario from 4% in the absence of the Games to 7% with the Games. Similarly delegate growth under the moderate scenario moves from 1% per annum to 5%. Both with and without the Games, the conservative scenario is a no-growth outlook beyond a base line level of attendance. The incremental economic impact of the VCEC expansion, with and without the Games, is summarized with the Games impacts at the end of this paper.

It is worth noting here that Games-related convention impacts of the magnitude experienced by either Sydney or Barcelona would considerably reduce the time required to recover the investment in expansion of the VCEC from the currently projected seven years under the moderate growth scenario. Again, these benefit are reflected in the VCEC model outputs, not in the outputs from the 2010 model.

V. LESSONS LEARNED

What can we learn from previous Games? As noted earlier, the data records for previous Winter Games is both spotty and inconsistent and there has been little concerted effort to monitor post-Games impacts by host governments. Tourism data is frequently reported

out of context. There is no standardized form of accounting of Games costs. The official reports also tend be written in an anecdotal style which leaves data open to interpretation.

We can say that Calgary (1988), Lillehammer (1994) and Nagano (1998) all reported large increases in tourism volume during their respective Games year. Calgary's results have been discussed above. A study of the impact of the Lillehammer Games, conducted three years after the Games, reported substantial and ongoing growth in tourism volumes for Norway.

Even with perfect data, the experience of previous Games host communities should be treated as broadly illustrative rather than predictive for the next host community. There are lessons to be learned from past experience but there are also political, geographic and social factors unique to the host community or region that influence both the host's approach to the Games and the outcome of those Games. The Nagano Games is a case in point. The 1998 Winter Games event was the most expensive Winter Games ever, by a large margin. This outcome was not the result of poor planning or execution. It was the result of a political decision by the host government to stage the Games across four geographically dispersed communities, requiring duplication of infrastructure and services.

VI. Risks versus Rewards

The potentially large economic rewards from hallmark events are exposed to erosion through a variety of risks. Some risks are common to all capital projects and are minimized through good corporate practices in the design, development and management of activities and in judicious application of insurance and risk management programs. This model assumes the VW2010 group and the Province recognize these largely internal or *endogenous* risks and will effectively manage them going forward.

Perhaps the most devastating endogenous risk is that, in spite of best efforts, the delivery of the Games is materially flawed. This *performance* risk could crystallize in any of a variety of forms such as: the transportation system fails under peak pressure or isn't ready in time, the GVRD water supply is vandalized and rendered undrinkable, or the international media is badly treated in some way. Widespread international coverage of any event of this nature could create substantial lasting damage to the tourism industry and the economic legacy of the Games depending on the severity of the event and the effectiveness of the response. Fortunately, such risks can be minimized through early identification and coordination of risk management planning amongst the public and private stakeholders.

Other risks are more problematic because they are external or *exogenous* potential events that are beyond the control of the Province but could dramatically affect the impact of the Games.

VII. The Exogenous Risks

1. A Prolonged USA Recession

Leading the list of potentially most damaging *exogenous* risks is the prospect of a prolonged recession in the USA. Given its predominant position in the global economy, a USA recession would probably spawn or reflect a worldwide recession. A significant USA recession would directly reduce tourism volumes and expenditures and, depending on its timing and duration, could severely limit the ability of VW2010 to meet its revenue targets through broadcast rights and sponsorships. The effect of recession on Games revenue contracts would be moderated and possibly eliminated if the recession struck early in the sponsorship or broadcast licence bidding process and the bidders anticipated an economic upturn before the Games. Once sponsorship and licence contracts are in place, the revenue to VW2010 is assured and not subject to impact of recession, except through a corporate default.

Within the USA, a recession on the west coast would have a more dramatic impact on British Columbia's tourism prospects than a recession centred east of the Rocky Mountains. Historically, about 75% of all USA visitors to British Columbia originate in the western states with fully 50% of the total USA volume coming from Washington State and California. A substantial downturn in the fortunes of major employers such as Boeing or Microsoft would have similar material consequences for the province.

Open skies aviation policy has already increased international access to British Columbia. The expansion of USA and international air connections, and the expanding role of the Internet in travel planning and booking, provide the travel industry with new tools to ameliorate the impact of a west coast recession by focusing their marketing reach farther afield.

While the current global economic recession will prove to be a blessing in disguise for VW2010 if it sets the stage for a period of sustained economic growth into the next decade, it is also a reminder that business cycles have not been eliminated. Despite the best-coordinated efforts of the governments of the advanced industrial economies and international agencies such as the OECD, they have yet to succeed in maintaining a smooth or constant growth path. Arguably, nations have demonstrated greater success in digging out of a recession than in stopping the slide into recession. This would suggest the odds of a deep, multi-year recession during our 20-year window are not great.

2. Exchange rate movement (see Appendix B for detailed Discussion)

Movement in the rate of exchange between the Canadian dollar and other currencies, particularly the USA dollar, has implications for international visitor volumes to British Columbia, the cost of the Games and the value of Olympic revenues from foreign sources. At greatest risk from exchange rate movement are the foreign-sourced sponsorship and broadcast revenues and foreign-sourced goods and services. Most of these arrangements are negotiated in USA dollars.

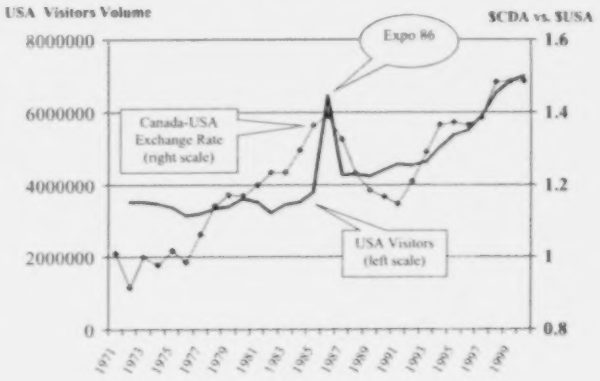
Revenue payments flow over a period of several years spanning the Games. Any strengthening in the Canadian dollar during the USA dollar denominated revenue collection years will be reflected in lower Games revenue and reduced economic benefit.

Conversely, a weakening in the dollar will generate a windfall gain. The reverse is true for payments to external suppliers of goods and services. There is some opportunity to manage this risk through hedging, once contract values have been established.

While the impact of currency fluctuations is obvious for payments denominated in foreign currency, the impact on tourism volumes is much less clear. Following is a précis of a discussion of the role of exchange rates in travel decisions, found in Appendix B at the end of this paper.

A "favourable exchange rate" is often cited in the media as a reason for international tourism. Accordingly, one might expect a weakening Canadian dollar to be a persistent incentive for tourism travel to Canada for Americans and other internationals with strong currencies relative to Canada. The historical data does not support this conclusion.

Volume of USA Overnight Visitors vs Exchange Rate
1972 – 2000



Why is this so? The simple answer is that the exchange rate is not a good measure of the relative cost of living for a tourist at the foreign destination versus at home or at alternative destinations. The exchange rate says nothing about the purchasing power of that local currency in the local economy, either now or previously. Nor does it say anything about the relative purchasing power of the purchaser's own currency in this or any other local economy versus what it would buy at home.

The motivation for international travel is clearly grounded in a complex mix of economic and psychological factors. The psychological factors include, among many others, awareness of a destination (the marketer's job), the desire to see different places, to experience different things and the perception of good value for money. Analysis of the relative purchasing power of currencies, as reflected in the OECD's Purchasing Power Parity Index, suggests economic motivation to travel is more firmly rooted in an individual's sense of economic worth or well being than in the relative cost of a vacation, or the exchange rate. In other words, the unemployment rate in the potential visitors own country is likely to be a better indicator of travel than the exchange rate.

The conclusion one may draw from this is that British Columbia will continue to attract international visitors in spite of a significant strengthening of the Canadian dollar or weakening of the travelers' real purchasing power provided two core conditions are met:

(1) the visitor lives in a vigorous domestic economy that provides a sense of economic well being and hence the willingness to spend on travel; and, (2) the visitor *perceives* good value for money in British Columbia compared to competing destinations.

3. The Broadcast Licence Revenue

By far the largest single source of revenue that VW2010 will rely on to pay the bills is international broadcast licence fees negotiated for the Games. Neither VW2010 nor the Province can control this element as the IOC conducts the negotiations with the broadcast community directly. Under the amended IOC revenue splitting formula that is in effect for the 2010 Games, 49% of the broadcast rights fees collected by the IOC will flow to the host city, down from 60% for the 2000 Games and 50% for the 2002 Winter Games.

Two events may affect this revenue. Current IOC broadcast and sponsorship agreements expire with the 2008 Games. Hence, the 2010 Games will be the first to be held under the new contracts. Those contracts are yet to be negotiated. Past practice suggests the broadcast contracts for the next round of Games after 2008 will be signed sometime between 2002 and 2006 at which point the value of the contract to VW2010 will be established.

The second event is the continuing success of the broadcasters, particularly NBC, to translate their cost of licence fees into revenues and profits from the sale of advertising spots for the winter and summer Games through 2008. This revenue potential is a function of both consumer interest in the Games (i.e. TV audience size), and the consumer profile of the TV audience (i.e. the right age, gender, interest and income to buy the products advertised). If the audience appeal continues to grow through the decade, and the trends in sport tourism suggest it will, broadcast contracts and sponsorship values will continue to grow. Currently, the North American broadcast licence fee contributes nearly 64% of the total broadcast fees collected by the IOC. While the North American advertising market for the Olympics may be nearing saturation, the European and Asian markets have much greater expansion potential as the newly democratized economies evolve and media globalisation reaches increasingly into the eastern European and Asian economies. This model initially assumes the broadcast contract value in 2010 will stay level in real terms with that for the 2002 Games in Salt Lake. That would amount to about CDA$590 million in current dollars flowing to the VW2010 Organizing Committee. A more detailed discussion of media values is presented in section VII.

4. Interruption of the Games

Several Olympic Summer Games, including Munich in 1972, Montreal in 1976, and Moscow in 1980, and to a lesser degree Atlanta in 1996 were targeted for acts of terrorism, boycott or sabotage. Fortunately, the Winter Olympic Games have been spared thus far. The historically more dispersed, multi-venue, smaller scale nature of the winter Games compared to summer Games, and the much smaller number of countries engaged in winter sports makes the winter Games a less likely target for such events. Perversely, a boycott or a terrorist act initiated during the Games might have much less negative economic impact than an announcement made years in advance of the Games of

an intent to commit such an act during the Games. The latter event might discourage sponsors and advertisers before the key broadcast contracts are made and would also discourage international visitors and residents alike from attending during the Games.

The IOC has responded to the events of September 11 in the United States with a much more intensive security plan for the 2002 Winter Games in Salt Lake.

5. The Fallout From September 11

As recent events have demonstrated, significant acts of terror can have profound effects on the tourism and travel industry. Airlines around the world have grounded aircraft for want of passengers in the wake of widespread fear of further terrorist acts. Does this signal a permanent change in international travel? Not if history is a useful indicator.

Terrorism claiming the lives of innocent bystanders is not a new phenomenon. While the attack on New York was unprecedented in its scale, there has been a continuous stream of acts of terrorism, over many decades, involving every mode of transport and a wide variety of weapons. The anecdotal evidence indicates that communities affected by the violence initially pull back from the perceived danger. Those same communities, however, either take sufficient comfort in enhanced public security measures or accept that the world is a more dangerous place and simply get on with their lives. The shoppers return to the district that was bombed and the fliers return to the skies that were threatened. In the case of the Gulf War, it reportedly took 15 months for airline traffic to return to pre-war levels, but return it did.

In a worst-case scenario, a large portion of the North American population permanently abandons air transport. Perversely, that could foster a major boost for tourism in continental North America as Canadians and Americans who historically have taken flying vacations abroad in great numbers revert to domestic tourism patterns based on a perceived relative safety of ground transportation. "Rubber tire" tourism has long been a mainstay of the tourism industry in British Columbia.

6. Changing Demographics

Will consumers, the ticket buyers and the media audience, lose interest in sports events like the Olympic Games as the population ages? In recent years, increasing academic research has focused on an industry that has been labeled sport tourism. This industry has been defined as including those who travel to participate in sports, those who travel to watch sports and those who travel to visit sports-related facilities. Recent studies by George Washington University suggest sport tourism in the United States is growing at an annual rate of 8% - 10%.[5] Running against that trend, the National Football League (the "NFL"), major league baseball and the National Basketball Association (the "NBA") have been struggling with declining attendance for several years[6]. What risk does this represent for the 2010 Games?

Physical attendance at the winter Games is not large relative to other sports events. The Salt Lake 2002 group, for example expects daily attendance of about 70,000 spectators,

the majority of whom will be in-state residents. College football games in the United States routinely draw crowds that size, though not for 15 consecutive days.

On the other hand, the Olympics are without question the biggest media event in the world. This intense international interest is fueled by a variety of psychological factors which are largely unique to the Olympics - national pride, international rivalry (particularly in men's and women's hockey), the enduring quest to witness the stellar *Olympic* performance and the opportunity to witness exciting, unusual (ski flying?) or the latest demonstration sports that do not otherwise receive much media coverage. These interests remain with individuals long beyond the typical age bracket for active participation in sport. Accordingly, the risk of the audience falling away appears to be insignificant and more likely to expand than contract as the general trend toward global media networks and alliances broadens global exposure to the Games.

7. Weather and Quake

While the weather is an important factor in the quality of the Games experience, affecting everything from transportation to events schedules, the Calgary Winter Olympic Games in 1988 demonstrated that even the impact of Chinooks winds can be overcome by outstanding hospitality. The Nagano'98 Winter Games events were interrupted by an earthquake, too much snow, and too much rain at different points in the schedule: events were delayed but the Games were successful by all accounts. While Whistler lost its place on the international alpine race circuit due to variable snow conditions in December, the Games are held in February - an historically very reliable snow period for Whistler.

8. Sponsorships

After the broadcast licence fee, the next largest commercial revenue source is the joint marketing program with the Canadian Olympic Association. Given the small number of head office operations in British Columbia for national corporations, most of that sponsorship revenue will have to be captured outside the province.

VIII. It's All About the Media

While the broadcast revenue and other commercialization fees provide a means to finance the Games, the real economic prize is the unique opportunity the Games afford to increase long-term growth in international tourist visits to the province. There is no doubt that the favourable and extensive media exposure surrounding Expo 86 pushed international awareness of British Columbia to a new plateau and induced millions to visit the province both during and in the years following the event. The Olympic Games offer a similar but more intense opportunity to introduce a mass international audience to the destination appeal of British Columbia and to re-ignite the interest of previous visitors in visiting again. The ultimate economic impact of the Games will depend largely on how successfully British Columbia and its tourism industry converts that international exposure into new visitors before, during and after the Games.

While Expo 86 benefited from periodic international media exposure throughout its development phase and the exposition itself, the 2010 Olympic Games will concentrate unprecedented, vast and intense international media attention on the winning host city beginning with the run up to selection by the IOC in 2003 and building through the construction years to a climax during the Games.

While the Games are being held, the host country experiences intense international print, Internet and television exposure. The Nagano Winter Games in 1998 generated more than 6,000 hours of television coverage around the globe. To put this level of exposure into some sort of context, the entire annual tourism promotion budget of the Canadian Tourism Commission for the entire USA in 1998 was about $17 million. That expenditure would purchase about 30 minutes of prime time television advertising exposure on the NBC network in the USA.

International media interest in British Columbia will build with the award of the Games in 2003 and a substantial portion of it will be dedicated to telling its readers and viewers who we are. This substantial and largely free international promotion can be leveraged extensively through cooperative efforts by the national, provincial, municipal and industry marketing agencies in the interests of long-term tourism development. This pre-Games media coverage will have as equally great, if not a greater impact on long-term tourism growth than coverage during the Games event. Most of the media coverage during the Games will focus on the events themselves and hence serves principally to raise international recognition of the names Whistler, Vancouver or British Columbia by their association with the individual competitions. The challenge for the tourism industry and the Province will be to devise a media program that translates that heightened recognition into tourist visits after the Games.

Nor can the role of the Internet be ignored. The official Nagano Games web site set a world and Olympic record, receiving 646 million hits during the 15 days of the Games, peaking at 103,429 hits per minute. While the technology will undoubtedly change dramatically over the decade, the Internet can be expected to play an increasingly pervasive role in tourism promotion and travel decisions.

The 1998 Nagano Winter Games captured 9.2 billion viewers in 26 major market regions of the world. (A person who tunes into the broadcast three times counts as three viewers). According to major sponsors interviewed by Maclean's Magazine, the Olympic audience is uniquely appealing to corporate advertisers, and hence the broadcast networks, because the audience historically is fairly equally split between male and female viewers and attracts many who are not regular TV viewers[7]. In terms of its sheer scale, the Olympic audience is vastly greater than any other spectator event. These market statistics enticed national broadcasters around the world, such as CBC and NBC, to pay fees aggregating about CDA$1.1 billion to the IOC for the 2002 Winter Olympic Games in Salt Lake City. (The IOC will pass one half of this amount to the Salt Lake Organizing Committee.)

Those broadcasters will aim to recoup much more than their $1.1 billion outlay through sales of commercial "spots."

It is the broadcast licence fees and the commercial sponsorship contracts, more than any other revenue sources that makes it possible, though not automatic, to structure largely self-financing Games. While audience interest in the Games appears to be strong and growing, the growth in value of broadcast contracts will ultimately be limited by the physical amount of advertising time per hour of broadcast authorized by the television regulatory agencies in each country. For the purposes of this impact model, we have assumed the VW2010 share of broadcast fees stays level with the Salt Lake receipt in real terms.

In the words of Jones Lange LaSalle, *the key to success (or otherwise) of hosting major events such as the Olympics is largely dependent upon the ability of the city to leverage off the images and perceptions created during the event itself and to continue to deliver on the dream long after the circus has left town. How well can the city take advantage of the transient and fickle world focus? How indelible are the images? How can they best be sustained? All of these are questions a host city must answer in a strategic approach to leveraging the event.*

This model assumes a timely and effective response to this challenge by the Province (Tourism BC), VW2010, the Canadian Tourism Commission and the tourism industry in order to extract the maximum tourism exposure and impact for British Columbia.

IX. The Current State of the Input Data

The reliability of the outputs from this model will improve as the cost and visitor data is refined. This will be an iterative process as capital decisions, schedules, locations and programs are crystallized by the VW2010 office and as the actual results of the 2002 Games in Salt Lake City unfold.

Pending these events, we have primed the model using the best available data from the VW2010 office. It is important to note at this stage that the cost estimates are and will remain preliminary pending, confirmation of sites and verification of costs at those sites.

We have also used a preliminary schedule of capital spending which has all Games facilities completed and open by the end of 2008 to allow for testing, national team trials, World Championship events and practice sessions in 2009. Salt Lake scheduled 13 World events and three national team trials in its pre-Olympics year.

Staging the Olympic Games involves an extensive construction program. It must be noted that the incremental economic benefits are maximized with an orderly construction schedule which takes into account other projects such as the proposed Vancouver Convention and Exhibition Centre expansion project, a 48-month program in itself, and major, on-going highways improvements in order to minimize cost pressures in the

construction sector. If imported construction labour is required, the economic impact will be reduced to the extent those workers spend their income outside the province.

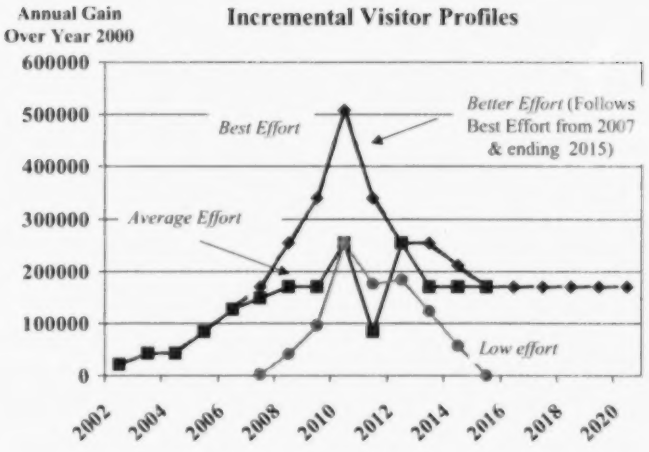
With respect to tourism, we have primed the model with estimates of potential tourism demand based on six growth scenarios. These scenarios reflect the tourism growth profiles (the pattern of growth, not the actual rate of growth) observed or expected from other hallmark events including other summer and winter Games and Expo 86 as well as our own estimates.

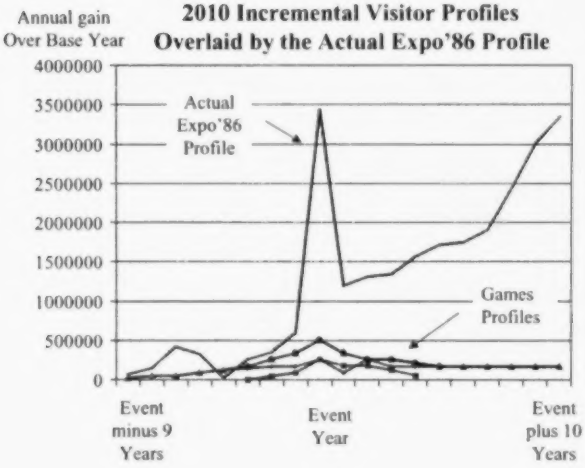
All of these scenarios result in economic impacts that fall within the range described by the summary tables presented below. The resulting bracketing of impacts defines a range of possible incremental impacts of the 2010 Games. Four of the six scenarios envisage tourism impacts starting in 2007 and ending in 2015, one scenario assumes tourism impacts beginning as early as 2002 and ending in 2015. The sixth scenario begins in 2002 and ends in 2020. The tourism impacts are not necessarily limited to that period. Arguably the tourism industry has been surfing on the crest of the wave created by Expo 86 ever since but as we move further away from the event year it becomes increasingly difficult to isolate the continuing event impacts from other more recent events that may have influenced tourism patterns.

These six tourism growth profiles result in cumulative incremental foreign tourism volume gains, relative to the foreign visitor volume in year 2000, ranging from a low of 0.33 million additional visitors under the *Low Effort/Low Response* scenario to a high of about 3.7 million additional visitors under the *Best Effort/Best Response* scenario. The incremental visitors are calculated as the difference between the base year (2000) total and the current year. Hence, if the base year total is 100 and the next three years' totals are 110, 105, 115, the cumulative incremental gain amount to 30. The nomenclature *Low, Average, Better and Best* is used to reflect the cumulative outcome of the scenario, not the starting point, end point or peak growth rate of the scenario.

Five of these growth profiles assume the international awareness of British Columbia created by the Games exposure fades out after 2015. The sixth scenario (*Best Effort/Best Response*), assumes the marketing impact is sufficiently broad and deep as to permanently raise international awareness of British Columbia as a tourism destination. To put these projected gains in perspective, incremental foreign tourism visits to British Columbia rose about 2.8 million in the Expo 86 year alone compared to the immediate pre-Expo year, 1985. During the first five post-Expo years, 1987 - 1991, the cumulative incremental gains, excluding the Expo year, amounted to about 4.1 million foreign visitors relative to the 1985 level. In the first 10 post-Expo years the cumulative incremental gain was 13.6 million foreign visitors.

This first chart plots the four growth profiles used in the summary tables below. As explained above, the plotted points represent incremental growth relative to the base year 2000. For example, the *Best Effort* scenario peaks in 2010 at about 500,000 more visitors in that year than British Columbia received in 2000.





Again, to put these growth scenarios into some historical context in terms of the scale of the tourism impacts considered in this Games evaluation, the chart on the left presents the actual incremental foreign visitor profile surrounding Expo 86 overlaid on the visitor profile scenarios used for impact of the 2010 Games.

The table below provides the actual incremental rates used in the four tourism profiles described above. As described elsewhere, the calculation represents the additional foreign visitors expected to be attracted to the province in a given year by the Games-related exposure, relative to the base value in year 2000.

In 2000, British Columbia attracted 8,481,727 foreign visitors. Hence a 2% increment under the *Average Effort* scenario for 2008 would represent 2% of the year 2000 base, or about 169,634 additional visitors.

Finally, as the table illustrates, the *Low Effort* scenario represents the lowest cumulative impact at 11.01% while the *Best Effort* represents the highest cumulative impact at 43.5%.

Incremental Annual Impact Rates

	Low Effort	Average Effort	Better Effort	Best Effort
2001	0.00%	0.00%	0.00%	0.00%
2002	0.00%	0.25%	0.00%	0.25%
2003	0.00%	0.50%	0.00%	0.50%
2004	0.00%	0.50%	0.00%	0.50%
2005	0.00%	1.00%	0.00%	1.00%
2006	0.00%	1.50%	0.00%	1.50%
2007	0.03%	1.75%	2.00%	2.00%
2008	0.49%	2.00%	3.00%	3.00%
2009	1.12%	2.00%	4.00%	4.00%
2010	3.00%	3.00%	6.00%	6.00%
2011	2.08%	1.00%	4.00%	4.00%
2012	2.17%	3.00%	3.00%	3.00%
2013	1.46%	2.00%	3.00%	3.00%
2014	0.66%	2.00%	2.50%	2.50%
2015	0.00%	2.00%	2.00%	2.00%
2016	0.00%	0.00%	0.00%	2.00%
2017	0.00%	0.00%	0.00%	2.00%
2018	0.00%	0.00%	0.00%	2.00%
2019	0.00%	0.00%	0.00%	2.00%
2020	0.00%	0.00%	0.00%	2.00%
	11.01%	22.50%	29.50%	43.25%

X. The Economic Impact of the 2010 Games - Initial Estimates

Given the aforementioned cost structure and our tourism estimates, the Net Present Value of the economic impacts of the Games over the observation period would fall into the range described below. All dollar values are presented as year 2001 dollars. As is demonstrated in the summary impact tables below, job creation would be a very significant outcome of the Games initiative. The calculation methodology and interpretation of these jobs are set out in Appendix A, attached.

Through Expo 86, British Columbia demonstrated that it has the spirit, capability and volunteerism to stage a very successful hallmark event. The greatest achievement of Expo 86 was the marketing of British Columbia to the world, which it did with a degree of success never since matched in Canada.

In generating these outcomes described below, the model assumes the Games generate a Legacy Fund just equal to the post-Games net cost of maintaining and operating the facilities. Any surplus in the Fund would add to the incremental benefits while a deficit would require additional provincial spending which would increase the gross impact but not the incremental impact.

As noted earlier, there are a variety of health, safety, psychological and other benefits not immediately quantifiable which will arise from the Games development program which are not captured in the following impact tables. There are also substantial long-term tourism benefits extending well beyond 2015 associated with the proposed recreational infrastructure development in the Callaghan Valley that are not captured in these tables. Arthur Andersen is conducting a separate assessment of the impact of the Callaghan Valley development on the region.

The following tables summarize the anticipated gross and incremental benefits under four tourism marketing and capture scenarios as described below. It is important to note that the gains achieved in moving forward from the *Low Effort* scenario to the *Best Effort* scenario are gains that are achievable largely by "working smarter" on the marketing challenge - maximizing coordination, cooperation and sophistication amongst the national, provincial, regional, municipal and industry marketing agencies to define and deliver a sustained, highly defined marketing program with the greatest market penetration potential.

SCENARIO	MARKETING INITIATIVE	MARKET RESPONSE
LOW EFFORT/LOW RESPONSE	Inter-agency marketing efforts slow to form, uncoordinated, inadequate. Development potential of 2003 to 2007 period ignored. Marketing focus is host community specific.	No tourism impact felt before 2007 and fades quickly after 2010.
AVERAGE EFFORT/AVERAGE RESPONSE	Inter-agency marketing activities slow to form but coordinated, visiting journalist program and other outreach opportunities not maximized. Marketing focus is community or season specific.	Modest gains start in 2002 and build slowly to a low peak in 2010, then maintaining a lower, flat growth through 2015
BETTER EFFORT/BETTER RESPONSE	Inter-agency marketing activities are organized and operational when the bid is won in 2003. Every effort is made to capitalize on international media attention from 2003 through 2010. Marketing focus is on British Columbia as a year-round destination.	Tourism impacts may begin as early as 2002 but significant impacts begin in 2007 and build through 2010, declining gradually between 2011 and 2015.
BEST EFFORT/BEST RESPONSE	Cooperation is maximized amongst all agencies to generate a super effort comparable to Expo 86. The potential of Internet and other new media forms are exploited to their fullest. Marketing focus is on British Columbia as a year-round destination.	Tourism impacts grow slowly from 2002 through 2006 then accelerate through 2010, fading slowly thereafter until 2020.

Summary Table of *Gross* Economic Impacts -2010 Games[1]

TOURISM IMPACT SCENARIO (MARKETING EFFORT/SUCCESS)	GDP (BILLIONS)	JOBS[2] (THOUSANDS)	FED TAXES (MILLIONS)	PROV TAXES (MILLIONS)	LOCAL TAXES (MILLIONS)
LOW EFFORT/LOW RESPONSE	2.7	59	245	236	48
AVERAGE EFFORT/AVERAGE RESPONSE	3.4	76	356	335	68
BETTER EFFORT/BETTER RESPONSE	3.9	90	438	408	83
BEST EFFORT/BEST RESPONSE	4.6	106	535	496	100

Summary Table of *Incremental* Economic Impacts - 2010 Games[1]

TOURISM IMPACT SCENARIO (MARKETING EFFORT/SUCCESS)	GDP (BILLIONS)	JOBS[2] (THOUSANDS)	FED TAXES (MILLIONS)	PROV TAXES (MILLIONS)	LOCAL TAXES (MILLIONS)
LOW EFFORT/LOW RESPONSE	1.6	37	175	164	37
AVERAGE EFFORT/AVERAGE RESPONSE	2.4	55	288	265	57
BETTER EFFORT/BETTER RESPONSE	2.8	67	367	336	71
BEST EFFORT/BEST RESPONSE	3.5	83	467	426	89

[1] NOTE: Dollar values are Net Present Value of the benefit streams 2001 - 2020 , in 2001 dollars

[2] NOTE: Aggregate of person-years of employment over the period. See Appendix A for description.

There are also some potentially very substantial economic synergies associated with developing the Vancouver Convention and Exhibition Centre expansion in concert with the Games development. The VCEC expansion would provide a critical facility needed for the Games while the international media attention surrounding the development of the Games would have a positive influence on international convention delegate growth.

To reiterate, the economic impacts of the VCEC expansion have been modeled separately, independent from the Games initiative, based on international delegate attendance and expenditure projections developed by KPMG. The results of that modeling exercise are summarized below.

As with the Games impact analysis, the *incremental* benefits presented below, for the province and Canada from the VCEC expansion, are the benefits accruing only from the spending in the province and in Canada, respectively, by foreign delegates and Canadian delegates who would otherwise have spent their convention dollars abroad. That is, net new revenue into the province, or kept in the province/Canada, that is unique to the expansion project. Hence, the incremental impacts of the expansion are wholly *additional* to the impacts of the Games, recorded above, for both Canada and the Province.

These summary VCEC expansion impact tables do not include any coincident or subsequent tourism impacts created by delegate attendance in the province, due to lack of reliable data. Nevertheless, there is ample anecdotal evidence of delegate travel behaviour to suggest significant numbers of international delegates (25% in the sole survey we could locate) stay extra days before or after a convention, or return later with the family for a vacation. Consequently, the VCEC impact tables probably significantly underestimate the impact of expansion.

Only the *incremental* impacts of the VCEC expansion have been calculated. These are summarized below. The *gross* impacts would be considerably larger in all categories. The scenarios described below indicate the proposed senior governments' share of the projected $495 million cost of the expansion will be recovered by senior governments 1.9 to 3.4 times over.

Summary Table of *Incremental* Economic Impacts - VCEC Expansion[3]

	GDP (Billions)	JOBS[4] (Thousands)	FED TAXES (Millions)	PROV TAXES (Millions)	LOCAL TAXES (Millions)
VCEC Expansion *without* 2010 Games					
Conservative Growth	3.5	65	384	367	73
Moderate Growth	4.3	87	478	453	91
Aggressive Growth	5.1	111	575	542	108
VCEC Expansion *with* 2010 Games					
Conservative Growth	4.1	81	453	430	86
Moderate Growth	5.5	121	618	581	116
Aggressive Growth	6.5	145	718	674	135

[3] Note: Net Present Value of the benefit stream over the 30 year economic life of the asset.

[4] Note: Aggregate of person-years of employment over the 30 year period. See Appendix A for description.

If the games and the initiative and the VCEC expansion program are developed in concert, the combined incremental impact would be expected to fall within the range described in the following table.

Summary Table of *Incremental* Economic Impacts - VCEC Expansion & Games[5]

	GDP (Billions)	JOBS[6] (Thousands)	FED TAXES (Millions)	PROV TAXES (Millions)	LOCAL TAXES (Millions)
VCEC Expansion & 2010 Games					
Low Tourism & Delegate Impact	5.7	118	628	594	123
Moderate Tourism & Delegate Impact	8.1	182	945	881	180
High Tourism & Delegate Impact	10.0	228	1185	1100	224

[5] Note: Dollar Values are Net Present Value of the respective benefit streams, in 2001 dollars

[6] Note: Aggregate of person-years of employment over the observation period. See Appendix A for description

CONCLUSION:

As the model and the experiences of former host cities illustrate, hosting the 2010 Winter Olympic Games and Paralympic Games can be a very rewarding exercise for the host communities and the province under appropriate circumstances. The economic rewards are largely dependent on striking an appropriate balance between the all-in cost of hosting the Games and the visitor volumes than can be generated before, during and following the Games. As Expo 86, Calgary'88 and other hallmark events have demonstrated, a long-term boost in visitor volumes can be achieved with a combination of well-executed Games delivery and a media campaign carefully designed to integrate with, and take full advantage of, the international broadcast coverage before and during the Games.

If the success of Expo 86 is any indication, and taking into account the inherent differences between an Olympic event and an exposition, a well-executed campaign around the 2010 Games should be expected to generate incremental benefits for Canada and British Columbia in the range represented by the *Better Effort/Better Response* and *Best Effort/Best Response* lines in the preceding table.

APPENDIX A

The Economic Model

In order to assess the potential economic impact of the 2010 Games, the sensitivity model endeavours to capture the capital and operating costs of the Games, and the tourism expenditures over a 20-year period spanning the Games. The potential impact period begins in 2001 and includes the bid process, selection as host city, the construction phase, the Games phase and up to 10 years of post-Games tourism activity ending in 2020. In all but the *Best Effort/Best Response* scenario tourism impacts are assumed to fade out by the sixth year following the Games.

This model cannot predict costs or revenues. It does provide a measure of the gross and incremental economic impacts that can be expected for any given set of cost and visitor profiles. These impacts are recorded for Gross Domestic Product (GDP), employment, and federal, provincial and municipal tax revenues. As with any model the quality of the outputs is highly dependent on the quality of cost and visitor estimates that are used as inputs. All data is adjusted to year-2001 Canadian dollars.

REAL VERSUS NOMINAL DOLLARS

All dollar calculations are made in constant year 2001 Canadian dollars to provide a consistent basis for comparison over the 20-year observation window. To summarize the 20 years of data as a single, year-2001 total for each variable, the data has been discounted into a Net Present Value at year 2001. The Province of British Columbia real 30-year bond rate is used as the discount rate.

ACCOUNTING FOR RISKS

There are two primary methods to accommodate risk in an economic evaluation. The first is to reduce the economic benefit number by an amount deemed sufficient to off-set the perceived impact of a worst case scenario - the visitors do not come, costs are overrun, etc. This is accomplished by discounting future benefits to a present value using a discount rate set sufficiently high to off-set the presumed risk. The choice of discount rate is inherently subjective and largely arbitrary.

The alternative method and the method used in this paper is to construct a model of the economic impacts where the results can be tested under a virtually unlimited range of risk scenarios for the key variables. Having dealt with the risks through the sensitivity analysis, we then apply a discount rate that simply reflects the Province's long-term cost of funds. Six tourism impact profiles were developed, (described in the body of this paper), based on the experiences at other Olympic sites and with Expo 86. These six scenarios generated tourism impacts that were captured within the range defined by the following four scenarios, representing the perceived likely worst case outcome (*Low Effort/Low Response*), a low moderate outcome (*Average Effort/Average Response*), a high moderate outcome (*Better Effort/Better Response*), and the likely best case outcome (*Best Effort/Best Response*).

PRESENT VALUES

The costs and the revenue benefits are incurred or received over extended and different time frames. Most of the cost will be incurred between 2003 and 2009 while much of the revenue will occur after 2008. In order to compare the costs and the revenues on an equal footing we have to adjust for the fact that a dollar received in 2008, for example, is worth less than a dollar received, or a dollar spent in any year before 2008, and is worth more than a dollar spent or earned in any year after 2008, due to the cost of money. This adjustment is handled by a standard *net present value,* or NPV formula which reduces the stream of costs to be incurred over successive years to a single value which represents the total costs if they were paid in a single lump sum now. Similarly, the stream of revenue flows are converted to a single sum representing the total revenue if it was all received now. These two sums can then be compared to determine if the projected revenues will exceed the projected costs.

COSTS

Costs include both capital and operating and are accumulated in the model under three categories - *Gross Costs, Gross in-British Columbia Costs* and *Net Incremental In-British Columbia Costs. Gross Costs* includes all costs, whether incurred in British Columbia or elsewhere, and represent the whole cost of the Games. *Gross In-BC Costs* is a sub-set of Gross Costs and captures only those costs that have an economic impact in British Columbia. *Net Incremental In-BC Costs* is a sub-set of *Gross In-BC Costs* and captures only those costs that have a *incremental* economic impact in British Columbia. For the purposes of this analysis, only that portion of total Games costs incurred in British Columbia which are offset by Games revenues received from sources outside the province have an incremental impact on the economy.

Costs in each category are aggregated over the 20-year observation period to create a single summary cost statistic in each category. These costs are built up from costs that are (a) the responsibility of the VW2010 Organizing Committee of the Olympic Games (*OCOG Costs*) and (b) costs that are the responsibility of others, such as supportive non-Games infrastructure improvements by the Province, municipality or private individuals (*Non-OCOG Costs*).

VISITORS DEFINED

The model categorizes Games-related visitors as *External Visitors, Resident Visitors or Resident Spectators. External Visitors* are further subdivided into Games participants, (media, athletes, sponsors, delegates and officials), and tourists, the unifying characteristic being that none are residents of British Columbia. *Resident Visitors* are British Columbia residents from outside Greater Vancouver and Whistler who attend the Games as spectators and who will stay in rented accommodation. *Resident Spectators* are those normally resident within the GVRD or Whistler area who would live at home while attending the Games and thus have a different spending pattern than visitors.

The tourist component of both the External Visitor and Resident Visitor categories require special attention to correct for displacement of "normal" tourism that occurs

around mega-events. Some British Columbia residents who would normally take a vacation skiing in British Columbia in February may vacation outside British Columbia instead to avoid the Olympic crowds. Some regular visitors to British Columbia will stay away to avoid anticipated congestion. Both of those groups represent negative incremental economic impacts for British Columbia.

Conversely, some residents who might normally vacation in Hawaii, for example, in February will forego that trip to stay in British Columbia to be part of the Olympic experience. Some foreign visitors not otherwise destined for British Columbia will be drawn to the province by the Games' publicity, before, during or after the event . Both of those groups represent a positive incremental economic impact for British Columbia.

Finally, *Resident Visitors* and *Resident Spectators* who would have stayed in the province with or without the Games represent a gross economic impact but not an incremental impact.

JOBS DEFINED

The jobs data in this paper are calculated using the industry employment multipliers generated by the provincial Input Output Model. The Input Output Model is maintained by BC Stats, Ministry of Finance and is based on data collected by Statistics Canada. These employment multipliers are determined from actual historical data on industry income and employment provided by Statistics Canada. As such, the multipliers present an historically accurate picture of the job creation associated with a particular level of income, or conversely expenditure, in an industry sector. Because an industry's structural characteristics change relatively slowly over time, these multipliers provide a fairly reliable basis to forecast the typical or average employment impacts of future expenditures.

For practical purposes the job count should be considered as the aggregate *person-year equivalents* created over the life of the project, not simply new full time jobs. Hence, if 5,000 full time, 5,000 half time and 10,000 quarter time jobs were created in the first year of a three year spending/investment program, and the same level of spending occurred in the next two years, the same pattern of employment would be maintained in the second and third year for an aggregate person-year equivalent for the project of 30,000 jobs. If more of the spending occurred in the first year and less in the second and third year, the same 30,000 person-years of employment would be created but more of it would occur in the first year and less in the subsequent years.

While many jobs associated with the 2010 Games project or the VCEC expansion would be new full time jobs there would also be many jobs represented by some existing part time jobs that become full time, some casual jobs that become full time, some casual jobs that become part time and some new casual jobs. The aggregate of all of these additional hours of employment is equivalent to the number of jobs projected by the employment multiplier.

As new spending funds these hours of employment, the pace of spending and the duration of spending determine the pace of job creation. In a vibrant economy, as one spending stream shrinks it is off-set by increase elsewhere and total employment rises.

CALCULATING IMPACTS

Similar to the cost statistics described previously, the annual visitor spending data from the 20-year observation window (20 years in the *Best Effort* scenario) is rolled into single Net Present Value totals for *Gross Visitor Spending in British Columbia* and *Net Incremental Visitor Spending in British Columbia* to create summary visitor expenditure statistics. Both the summary cost statistics and the summary visitor expenditure statistics are then individually distributed across the major industrial sectors categories according to how the direct expenditure is perceived to occur. For example, for each dollar an external tourist spends in British Columbia at the Games, historical analysis may suggest 39 cents or 39% will go toward accommodation, 10% to transportation, 25% to food and beverages, 15% to retail purchases (Games souvenirs, etc.) and the balance for entertainment (event tickets). Similarly, the construction of a bob/luge run will involve expenditures for physical construction, business services (architects, engineers etc.), furniture fixtures and equipment, transportation and insurance, among others. These distributed amounts are then multiplied by the appropriate sector Input/Output multipliers from the British Columbia Input Output Model tables and accumulated to create an aggregate economic impact number.

In calculating the impacts, money that is removed, or *leaks*, from the economy has to be identified and excluded from the calculations. Leakage occurs through a variety of transactions, the most obvious being the payment to foreign suppliers for goods we import. The economic multipliers used in the provincial Input/Output model capture normal leakages based on historical economic performance, the typical import content in construction of an apartment building for example, but the multipliers do not capture what this model calls *Extraordinary Leakage*. Construction of a bob/luge track for the Games will be a unique economic event in the province. If that facility requires, for example, the importation of a $5 million freezer plant, that leakage will not be reflected in the multipliers and must be manually deleted to avoid over-stating the impacts.

GROSS IMPACTS VERSUS INCREMENTAL IMPACTS

The model produces both *gross* impact data and *incremental* impact data. The gross economic impact measures generally conform to what one would expect if the gross expenditures were run through the British Columbia Input/Output model. Gross economic impacts on GDP, employment and tax revenues are valid and useful measures of the impact of expenditures but they do not distinguish between the impact of a dollar spent on the Games in British Columbia by a British Columbia resident who would otherwise have spent that dollar in the province anyway, versus a dollar spent in British Columbia by a non-resident. Similarly, for Canada, the gross impact does not distinguish between the impact of a dollar spent in Canada by a Canadian resident versus a foreign resident. This distinction is important to the respective provincial and federal treasuries and to the taxpayer because the dollar spent in British Columbia (or Canada) by a resident simply re-circulates within the economy generating the same tax revenue, on average,

whether it is spent on a Games ticket or a theatre ticket. The dollar spent by the non-resident visitor for a ticket is an additional or *incremental* dollar of spending introduced into the economy, which, among other things, generates *incremental* tax revenue the respective federal and provincial treasuries could not otherwise capture if the non-resident did not spend the dollar in British Columbia or Canada respectively. For British Columbia, *non-resident* means anyone not normally resident in the province, including other Canadian persons, organizations and governments plus all foreign-based persons and organizations. At the federal level, non-resident means only persons, organizations or governments not normally resident in Canada. Hence, an Ontario visitor or sponsor spending in British Columbia has an incremental impact at the provincial level but not at the federal level.

While gross impact data is a useful description of the overall economic impact of the Games, it is the *incremental economic impact* of the Games that determines whether hosting the Games really makes economic sense. In calculating impacts, the model firsts adjusts the gross Games-related expenditures to eliminate identifiable extraordinary leakages. The result is *Gross In-BC Costs*.

Gross in-BC Costs are then multiplied by the percent of Gross in-British Columbia costs that are known or are anticipated to be offset, directly or indirectly, by Games revenues sourced outside British Columbia. That is, the percentage of costs that are anticipated to be covered by the share of broadcasting fees the IOC provides, sponsorship revenue from non-British Columbia sources, federal contributions, etc.- revenue that would not otherwise flow to British Columbia. For the equivalent federal calculation, only revenues originating outside Canada are counted. The product of this calculation is labeled *Net Incremental In-BC Costs* in the model. Multiplying these costs by the I/O multipliers provides a measure of the incremental economic impact for British Columbia, or, in other words, the economic impacts that would not otherwise occur in British Columbia without the Games.

Sales tax in the Input/Output Model

The British Columbia Input/Output Model multipliers do not capture federal and provincial consumer sales tax on the initial tourist expenditure. Indirect and induced impacts of these taxes are captured. Hence, the multipliers do not capture the PST and GST that a tourist pays on a taxable purchase. This tax impact is calculated separately and added to the tax calculations generated by the multipliers. According to Statistics Canada, about 6% of visitor GST is refunded under the federal rebate program for visitors.

Non-Games infrastructure enhancements

A singularly important aspect of a successful bid to host the Games is a convincing, rational plan for the physical movement of athletes and spectators between and amongst the various venues efficiently and within the time standards set by the IOC. In the Salt Lake City 2002 program, for example, significant upgrading or expansion of highways and passenger rail systems was undertaken. Such capital expenditures have been typically

described in bid documents of previous Games as "non-Games" expenditures. While these expenditures may not build the Games infrastructure per se, they are certainly fundamental to the smooth and efficient delivery of the Games and to the impact of the Games exposure on long-term tourism growth. While not hosting the Games would certainly represent a tourism development opportunity foregone, the media exposure from hosting a Games punctuated by traffic chaos could be immensely destructive to the tourism industry.

Since creation of the Resort Municipality of Whistler, Highway 99 access to Whistler has been under virtually continual upgrade in order to improve highway safety and access to the enormous tourism development potential of Whistler and the Lillooet region beyond. Tourism development will become an increasingly important economic engine in the region whether or not the Games are held. Highway upgrading will continue regardless, to improve safety and carrying capacity. Winning the host city bid will necessitate a formal commitment to an adequate upgrading program on an acceptable timetable in order to ensure appropriate access during the Games. As these improvements are funded from internal provincial resources, they create a gross economic impact but not an incremental impact in the context of this model. To the extent such *Non-OCOG Costs* are part of the province's conventional highways upgrade capital plan and schedule, their impact is not attributable to the Games.

As with *OCOG Costs*, there may be extraordinary leakages in this category - an imported tunnel-boring machine, for example.

THE GAMES LEGACY

If the 1998 Bid Book cost and revenue estimates were achieved, the Games revenues would exceed costs to leave a bank balance, or funding *legacy* exceeding $200 million. The Games legacy fund is assigned to a designated post-Games administrative vehicle to fund on-going sport development. One of the principle activities of the legacy administration is the care and feeding of the permanent competition facilities built for the Games but also handed over as part of the Games legacy. A Bob/Luge track, for example, has been estimated to require an annual operating subsidy of perhaps $2 million.

A legacy fund created from net revenues received from sources external to the province and the economic activity involved in the post-Games use of the facilities might be treated as an incremental benefit to the Province. For the purposes of this model, pending reliable data on the post-Games capital maintenance and operating costs of the legacy facilities, the Games legacy is assumed to equal the post-Games costs of those facilities and, hence, has no net incremental economic impact.

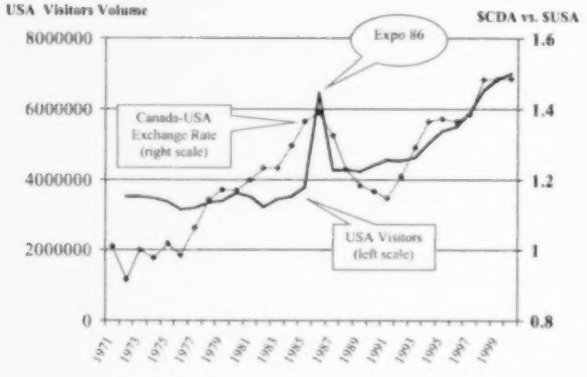
APPENDIX B

The Role of Exchange Rates in Travel Decisions

Movement in the rate of exchange between the Canadian dollar and other currencies, particularly the USA dollar, has implications for international visitor volumes to British Columbia, the cost of the Games and the value of Olympic revenues from foreign sources. At greatest risk from exchange rate movement are the foreign-sourced sponsorship and broadcast revenues and foreign-sourced goods and services. Most of these arrangements are negotiated in USA dollars.

Revenue payments flow over a period of several years spanning the Games. Any strengthening in the Canadian dollar during the USA dollar-denominated revenue collection years will be reflected in lower Games revenue and reduced economic benefit. Conversely, a weakening in the dollar will generate a windfall gain. The reverse is true for payments to external suppliers of goods and services. There is some opportunity to manage this risk through hedging, once contract values have been established.

Volume of USA Overnight Visitors vs Exchange Rate
1972 – 2000

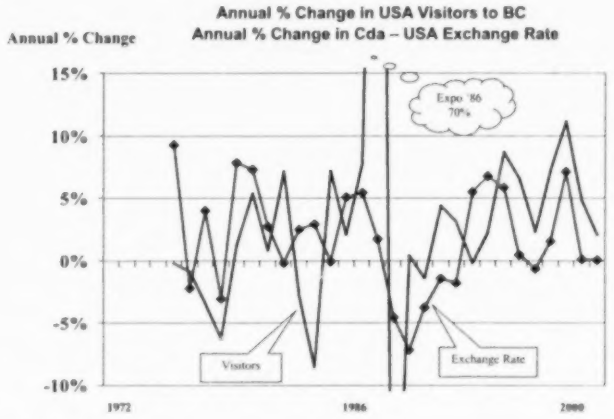


While the impact of currency fluctuations is obvious for payments denominated in foreign currency, the impact on tourism volumes is much less clear. The Canadian dollar has been trading at a considerable discount to the USA dollar for many years. As a "favourable exchange rate" is often cited in the media as a reason for international tourism, one might expect a weakening Canadian dollar to be a persistent incentive for tourism travel to Canada for Americans and other internationals with strong currencies relative to Canada. The historical data does not support this conclusion. There is no readily discernible material correlation between the Canada-USA exchange rate and American or international tourism to British Columbia.

In the observation period 1971 through 2000, using the simple average of the monthly rates as the annual Canada - USA exchange rate, growth in American visitors to British Columbia moved counter-intuitively about 40% of the time. That is, in 11 of the 28 years observed, American tourism to the province either grew during periods when the cost of the Canadian dollar was rising (i.e. the US dollar was worth less) or declined when the

cost of the dollar was falling. The comparative number for British and Japanese visitors was 46% and 36% respectively.

In the remaining 17 years of USA visitor data, when both tourism growth and the exchange rate were moving in the same direction, there is no material correlation between the size of the respective movements. A 0.11% change in the exchange rate corresponds to a 4.78% change in visitor volume in one case, while 7.85% change corresponds with a 1.16% change in visitor volume in another. Nor is there a discernible lag relationship between one and the other. Similar results are evident in the other two markets examined: Britain and Japan.



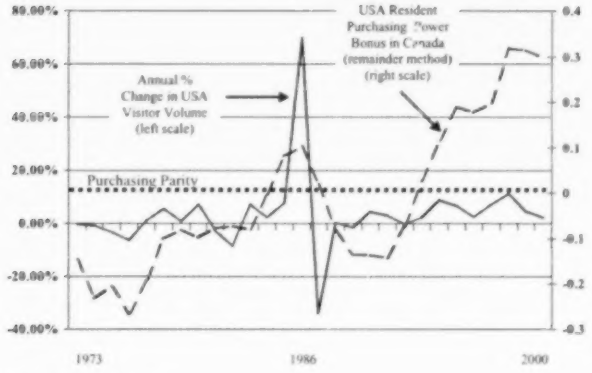
Why is this so? The simple answer is that exchange rates are not a good measure of the relative cost of living for a tourist at the foreign destination versus at home or at alternative destinations. A favourable exchange rate means only that the purchaser of the currency is getting more local currency per unit of his or her own domestic currency than in some preceding period: it says nothing about the purchasing power of that local currency in the local economy, either now or previously. Nor does it say anything about the relative purchasing power of the purchaser's own currency in this or any other local economy versus what it would buy at home.

To create a consistent basis for comparison of relative purchasing power of currencies in foreign markets, the OECD developed the Purchasing Power Parities Index (PPPI). This index measures the cost of a standard basket of goods in the local currency in the currency's domestic economy relative to what that same basket of goods would cost in the USA, in USA dollars. The cost of the USA basket in USA dollars is set at "1". Currently Canada scores about 1.2 relative to the USA.

When the USA resident visits British Columbia (or Canada) and purchases the standard basket of goods (in this case the hotel room, the food and beverages, the gasoline etc.) with a USA dollar, we charge $1.26 Canadian for that basket which would have cost $1.00 USA dollar in the USA. But, when the visitor proffers the USA dollar in payment in Canada we return 23 cents in change, assuming a current exchange rate of $1.49 to the USA dollar. For one USA dollar, the American visitor has received the same basket of goods he or she could have bought in the USA for one USA dollar and the visitor has

pocketed 23 cents Canadian in change. This 23 cents represents the USA traveler's "bonus" for vacationing in Canada versus staying at home. The same calculation can be made to determine the bonus (positive or negative) for visitors from other countries.

Annual rate of Change in USA Visitor Volumes vs. USA Resident Purchasing Power Bonus in Canada[1]



[1] See text for definitions

Does this explain international tourism movements? Not really. As the chart indicates the PPPI and the annual rate of change in USA visitor volumes sometimes move in opposite directions.

The more complex answer lies in the motivation to travel. The motivation for international travel is clearly grounded in a complex mix of monetary and psychological factors. The psychological factors include, among many others, the desire to experience different places, to see different things and the perception of good value for money. The monetary aspect of the motivation to travel appears more firmly rooted in an individual's sense of economic worth or well being than in the simple cost of a vacation or the exchange rate per se.

An individual's sense of economic well being is a function of his or her employment status, job security and disposable income among other things at the personal level and, at a broader level, in the general state of the economy in which he or she resides. Unlike the Canadian dollar, demand for, and hence the price of the USA dollar relative to the Canadian dollar, is driven in some large measure by the extraordinary international market demand for USA dollars as a multilateral or international trade currency. As a consequence, the underlying strength of the Canadian economy versus the USA economy is understated in the exchange rate.

Value for money is not a direct cost comparison of one thing or place to another but rather the aggregate of objective and subjective factors that lead the consumer to conclusions such as, the vacation experience was an expensive hassle and I would not do it again; it was expensive but so much fun I would do it again; or, it was cheaper than alternative destinations but dull and boring. Only the second scenario suggests good value for money if the vacation objective was to relax and have fun.

Two examples pertain. Recently there has been a surge of interest among Mexicans to vacation in British Columbia as reported in *Business In Vancouver*[3]. Again, the "favourable" exchange rate is cited as a key reason. Indeed, the exchange rate has

improved nearly 10% since the beginning of this year. Yet there was no corresponding surge of Mexican tourists in the 1990's, when the economic environment in Mexico was much different, even though 2.5 pesos would buy one dollar, versus the 6 pesos required today. Similarly, visitors from Britain have taken over as the leading off-shore visitor group with volume increases of 12.2% and 11.6% in the past two years. Much of this growth has been in winter tourism at Whistler. In that same period, the Canadian dollar has gained 8.6% against the pound. Part of the reason for the volume growth in the face of a declining pound is revealed in observations from hoteliers about the psychological element of tourism , *U.K. skiers appreciate good value such as having lessons in their own language, enjoying relatively uncrowded slopes and orderly lift lines.*[4] Of course it hasn't hurt that Britain's unemployment rate is reaching historical lows.

The conclusion one may draw from this is that British Columbia will continue to attract international visitors in spite of a significant strengthening of the Canadian dollar or weakening of the travelers "bonus" provided two core conditions are met: 1: the visitor lives in a vigorous domestic economy that provides a sense of economic well being and hence the willingness to spend on travel; and, 2: the visitor perceives good value for money in British Columbia compared to competing destinations.

Foot notes and References

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